

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SAMSUNG ELECTRONICS CO., LTD., and  
SAMSUNG ELECTRONICS AMERICA, INC.,  
Petitioner,

v.

PAPST LICENSING GMBH & CO. KG,  
Patent Owner.

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Case IPR2017-00714<sup>1</sup>  
Patent 6,470,399 B1

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Before JONI Y. CHANG, JENNIFER S. BISK, and JAMES B. ARPIN,  
*Administrative Patent Judges.*

CHANG, *Administrative Patent Judge.*

FINAL WRITTEN DECISION  
*35 U.S.C. § 318 (a) and 37 C.F.R. § 42.73*

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<sup>1</sup> Case IPR2017-01808 has been joined with this proceeding.

## I. INTRODUCTION

ZTE (USA) Inc. and ZTE Corporation (collectively, “ZTE”) filed a corrected Petition requesting an *inter partes* review of claims 1–3, 5, 6, 11, 14, and 15 (“the challenged claims”) of U.S. Patent No. 6,470,399 B1 (Ex. 1001, “the ’399 patent”) and a Declaration of Kevin Almeroth, Ph.D. (Ex. 1003). Paper 9 (“Pet.”). Papst Licensing GmbH & Co., KG (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). We instituted the instant *inter partes* review as to claims 1–3, 5, 6, 11, 14, and 15. Paper 10 (“Dec.”).

Subsequent to institution, we granted the Motion for Joinder filed by Olympus Corporation and Olympus America Inc. (collectively, “Olympus”), and Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, “Samsung” or “Petitioner”), joining Case IPR2017-01808 with the instant proceeding. Paper 16. We also granted a Joint Motion to Terminate with respect to ZTE (Paper 28) and a Joint Motion to Terminate with respect to Olympus (Paper 23).

Patent Owner filed a Response (Paper 15, “PO Resp.”) and a Declaration of Thomas Gafford (Ex. 2001). Petitioner filed a Reply. Paper 20 (“Reply”). A transcript of the telephonic oral hearing held on February 13, 2018, has been entered into the record as Paper 31 (“Tr.”).

This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). For the reasons that follow, Petitioner has demonstrated by a preponderance of the evidence that claims 1–3, 5, 6, 11, 14, and 15 of the ’399 patent are unpatentable.

*A. Related Matters*

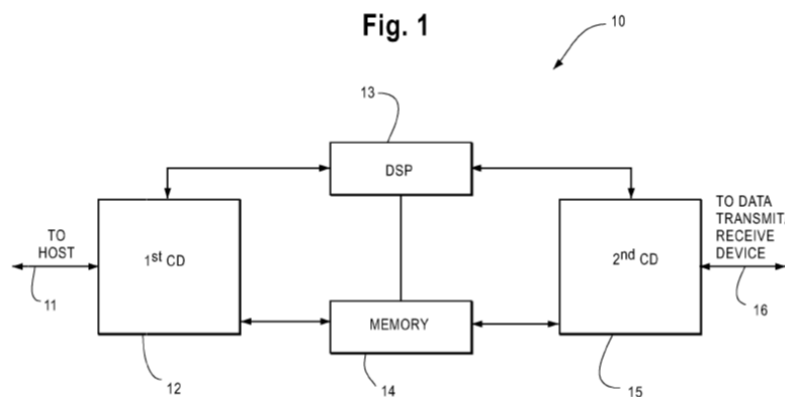
The parties indicate that the '399 patent is involved in *Papst Licensing GmbH & Co. KG v. Huawei Technologies Co., Ltd.*, Case No. 6:15-cv-01115 (E.D. Tex.) and other proceedings. Pet. 4–6; Paper 4, 2–5. The '399 patent also is involved in Cases IPR2016-01839 and IPR2016-01864. This Final Written Decision is entered concurrently with the Final Written Decisions in Cases IPR2016-01839 and IPR2016-01864.

*B. The '399 Patent*

The '399 patent describes interface devices for communication between a computer host device and a data transmit/receive device (e.g., a multi-meter, transmitting measured data to a computer). Ex. 1001, 1:9–13, 1:48–51. According to the '399 patent, using a specific driver to match very closely to an individual host system would achieve high data transfer rates across the interface, but the specific driver cannot be used with other host systems. *Id.* at 1:65–2:13. Several solutions to this problem were known in the art. *Id.* at 2:16–3:21. For example, IOtech introduced an interface device for laptops, using a plug-in card for converting the personal computer memory card association (“PCMCIA”) interface into a known standard interface (“IEEE 1284”). *Id.* at 2:19–24. The plug-in card provided a printer interface for enhancing data transfer rates. *Id.* at 2:24–28. In another example, a floppy disk drive interface was used for connecting a host device to a peripheral device. *Id.* at 3:6–10. The interface appeared as a floppy disk drive to the host, allowing a floppy disk drive and another peripheral

device to be connected to the host device. *Id.* at 3:13–15.

The '399 patent indicates that its “invention is based on the finding that both a high data transfer rate and host device-independent use can be achieved if a driver for an input/output device customary in a host device” is utilized. *Id.* at 4:23–27. Figure 1 of the '399 patent, reproduced below, illustrates a block diagram of an interface device.



As shown in Figure 1, interface device 10 connects to a host device via host line 11, and to a data transmit/receive device via output line 16. *Id.* at 5:47–63. Interface device 10 includes first connecting device 12, second connecting device 15, digital signal processor 13, and memory means 14. *Id.* In a preferred embodiment, the interface device is attached to a host device via a multi-purpose interface—e.g., a small computer systems interface (“SCSI”)—which includes both an interface card and the driver for the interface card. *Id.* at 4:40–46, 8:29–32. According to the '399 patent, SCSI interfaces were known to be present on most host devices or laptops. *Id.* at 9:32–33. By using a standard interface of a host device and by simulating an input/output device to the host device, the interface device “is

automatically supported by all known host systems without any additional sophisticated driver software.” *Id.* at 12:23–29.

### *C. Illustrative Claim*

Of the challenged claims, claims 1, 11, and 14 are independent. Claims 1 and 11 recite interface devices, and claim 14 recites a method for communicating between a host device and a data transmit/receive device via an interface device. Each of claims 2–3, 5, and 6 depends directly or indirectly from claim 1. Claim 15 depends directly from claim 14. Claim 1 is illustrative and is reproduced below with disputed limitations emphasized:

1. An interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, comprising:

a processor;

a memory;

a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and

a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,

wherein the interface device is configured by the processor and the memory to include a first command interpreter and a second command interpreter,

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